Title (en)

ELECTROLYTIC BATH FOR PRODUCING ANTIBACTERIAL METAL COATINGS CONTAINING NICKEL, PHOSPHORUS AND NANOPARTICLES OF AN ANTIBACTERIAL METAL (NI-P-MANP'S)

Title (de)

ELEKTROLYTISCHES BAD ZUR HERSTELLUNG ANTIBAKTERIELLER METALLBESCHICHTUNGEN MIT NICKEL, PHOSPHOR UND NANOPARTIKELN EINES ANTIBAKTERIELLEN METALLS (NI-P-MANP)

Title (fr)

BAIN ÉLECTROLYTIQUE POUR FORMER DES REVÊTEMENTS MÉTALLIQUES ANTIBACTÉRIENS NICKEL-PHOSPHORE-NANOPARTICULES DE MÉTAL ANTIBACTÉRIEN

Publication

EP 3098333 A1 20161130 (EN)

Application

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Priority

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Abstract (en)

The present invention proposes the use of an electrolytic bath to electroplate metal composites of nickel-phospohrous-metal nano-particles having antibacterial ability, which inhibits bacteria growing, such as Escherichia coli and Staphylococcus aureus, at least on 99% of its surface. The method of formulating an electrolytic bath allowing to obtain antibacterial coatings includes the following steps: a) adding p3+ ions to an electrolytic bath containing dissolved Ni salts, b) adding to the electrolytic bath metal nano-particles having antibacterial ability suspended in a cationic surfactant, c) electroplating the antibacterial composite metal of Ni-P-metal by applying a direct current density. The occlusion of metal nano-particles having antibacterial ability in the coating matrix provides it with antibacterial features.

IPC 8 full level

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CPC (source: EP US)

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